

FACILITY NAME AND PERMIT NUMBER: River Ridge Association Inc. VA0028029	PERMIT ACTION REQUESTED:	RIVER BASIN: Roanoke River
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FORM
2A
NPDES

NPDES FORM 2A APPLICATION OVERVIEW

APPLICATION OVERVIEW

Form 2A has been developed in a modular format and consists of a "Basic Application Information" packet and a "Supplemental Application Information" packet. The Basic Application Information packet is divided into two parts. All applicants must complete Parts A and C. Applicants with a design flow greater than or equal to 0.1 mgd must also complete Part B. Some applicants must also complete the Supplemental Application Information packet. The following items explain which parts of Form 2A you must complete.

BASIC APPLICATION INFORMATION:

- A. Basic Application Information for all Applicants.** All applicants must complete questions A.1 through A.8. A treatment works that discharges effluent to surface waters of the United States must also answer questions A.9 through A.12.
- B. Additional Application Information for Applicants with a Design Flow ≥ 0.1 mgd.** All treatment works that have design flows greater than or equal to 0.1 million gallons per day must complete questions B.1 through B.6.
- C. Certification.** All applicants must complete Part C (Certification).

SUPPLEMENTAL APPLICATION INFORMATION:

- D. Expanded Effluent Testing Data.** A treatment works that discharges effluent to surface waters of the United States and meets one or more of the following criteria must complete Part D (Expanded Effluent Testing Data):
 - 1. Has a design flow rate greater than or equal to 1mgd,
 - 2. Is required to have a pretreatment program (or has one in place), or
 - 3. Is otherwise required by the permitting authority to provide the information.
- E. Toxicity Testing Data.** A treatment works that meets one or more of the following criteria must complete Part E (Toxicity Testing Data):
 - 1. Has a design flow rate greater than or equal to 1 mgd,
 - 2. Is required to have a pretreatment program (or has one in place), or
 - 3. Is otherwise required by the permitting authority to submit results of toxicity testing.
- F. Industrial User Discharges and RCRA/CERCLA Wastes.** A treatment works that accepts process wastewater from any significant industrial users (SIUs) or receives RCRA or CERCLA wastes must complete Part F (Industrial User Discharges and RCRA/CERCLA Wastes). SIUs are defined as:
 - 1. All industrial users subject to Categorical Pretreatment Standards under 40 Code of Federal Regulations (CFR) 403.6 and 40 CFR Chapter I, Subchapter N (see instructions); and
 - 2. Any other industrial user that:
 - a. Discharges an average of 25,000 gallons per day or more of process wastewater to the treatment works (with certain exclusions); or
 - b. Contributes a process wastestream that makes up 5 percent or more of the average dry weather hydraulic or organic capacity of the treatment plant; or
 - c. Is designated as an SIU by the control authority.
- G. Combined Sewer Systems.** A treatment works that has a combined sewer system must complete Part G (Combined Sewer Systems).

ALL APPLICANTS MUST COMPLETE PART C (CERTIFICATION)

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BASIC APPLICATION INFORMATION

PART A. BASIC APPLICATION INFORMATION FOR ALL APPLICANTS:

All treatment works must complete questions A.1 through A.8 of this Basic Application Information Packet.

A.1. Facility Information.

Facility Name River Ridge Association WWTP

Mailing Address Post Office Box 40
Bracey, VA 23919

Contact Person Thomas Crowder

Title General Manager

Telephone Number (434) 636-5492

Facility Address State Route 751
 (not P.O. Box) Bracey, VA

A.2. Applicant Information. If the applicant is different from the above, provide the following:

Applicant Name Same as above

Mailing Address _____

Contact Person _____

Title _____

Telephone Number _____

Is the applicant the owner or operator (or both) of the treatment works?

☒ owner ☒ operator

Indicate whether correspondence regarding this permit should be directed to the facility or the applicant.

☒ facility ☐ applicant

A.3. Existing Environmental Permits. Provide the permit number of any existing environmental permits that have been issued to the treatment works (include state-issued permits).

NPDES <u>VA0028029</u>	PSD _____
UIC _____	Other _____
RCRA _____	Other _____

A.4. Collection System Information. Provide information on municipalities and areas served by the facility. Provide the name and population of each entity and, if known, provide information on the type of collection system (combined vs. separate) and its ownership (municipal, private, etc.).

Name	Population Served	Type of Collection System	Ownership
<u>River Ridge Association WWTP</u>	<u>approximately 1000</u>	<u>Separate Sanitary</u>	<u>Private</u>
_____	_____	_____	_____
_____	_____	_____	_____
Total population served	<u>approximately 1000</u>		

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A.5. Indian Country.

a. Is the treatment works located in Indian Country?
☐ Yes ☒ No

b. Does the treatment works discharge to a receiving water that is either in Indian Country or that is upstream from (and eventually flows through) Indian Country?
☐ Yes ☒ No

A.6. Flow. Indicate the design flow rate of the treatment plant (i.e., the wastewater flow rate that the plant was built to handle). Also provide the average daily flow rate and maximum daily flow rate for each of the last three years. Each year's data must be based on a 12-month time period with the 12th month of "this year" occurring no more than three months prior to this application submittal.

a. Design flow rate 0.150 mgd

	<u>Two Years Ago</u>	<u>Last Year</u>	<u>This Year</u>
b. Annual average daily flow rate	<u>0.0773 MGD</u>	<u>0.0627 MGD</u>	<u>0.0706 MGD</u>
c. Maximum daily flow rate	<u>0.226 MGD</u>	<u>0.133 MGD</u>	<u>0.156 MGD</u>

A.7. Collection System. Indicate the type(s) of collection system(s) used by the treatment plant. Check all that apply. Also estimate the percent contribution (by miles) of each.

☒ Separate sanitary sewer 100 %

☐ Combined storm and sanitary sewer _____ %

A.8. Discharges and Other Disposal Methods.

a. Does the treatment works discharge effluent to waters of the U.S.? ☒ Yes ☐ No

If yes, list how many of each of the following types of discharge points the treatment works uses:

i. Discharges of treated effluent 1

ii. Discharges of untreated or partially treated effluent 0

iii. Combined sewer overflow points 0

iv. Constructed emergency overflows (prior to the headworks) 0

v. Other _____ 0

b. Does the treatment works discharge effluent to basins, ponds, or other surface impoundments that do not have outlets for discharge to waters of the U.S.? ☒ Yes ☐ No

If yes, provide the following for each surface impoundment:

Location: Golf course irrigation pond

Annual average daily volume discharge to surface impoundment(s) 0.0706 mgd

Is discharge ☒ continuous or ☐ intermittent?

c. Does the treatment works land-apply treated wastewater? ☒ Yes ☐ No

If yes, provide the following for each land application site:

Location: Golf Course

Number of acres: 70 plus or minus acres

Annual average daily volume applied to site: 0.0706 mgd

Is land application ☐ continuous or ☒ intermittent?

d. Does the treatment works discharge or transport treated or untreated wastewater to another treatment works? ☐ Yes ☒ No

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If yes, describe the mean(s) by which the wastewater from the treatment works is discharged or transported to the other treatment works (e.g., tank truck, pipe). _____

If transport is by a party other than the applicant, provide: N/A

Transporter Name _____

Mailing Address _____

Contact Person _____

Title _____

Telephone Number _____

For each treatment works that receives this discharge, provide the following: N/A

Name _____

Mailing Address _____

Contact Person _____

Title _____

Telephone Number _____

If known, provide the NPDES permit number of the treatment works that receives this discharge _____

Provide the average daily flow rate from the treatment works into the receiving facility. _____ mgd

e. Does the treatment works discharge or dispose of its wastewater in a manner not included in A.8. through A.8.d above (e.g., underground percolation, well injection): ☐ Yes ☒ No

If yes, provide the following for each disposal method:

Description of method (including location and size of site(s) if applicable): _____

Annual daily volume disposed by this method: _____

Is disposal through this method ☐ continuous or ☐ intermittent?

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WASTEWATER DISCHARGES:

If you answered "Yes" to question A.8.a, complete questions A.9 through A.12 once for each outfall (including bypass points) through which effluent is discharged. Do not include information on combined sewer overflows in this section. If you answered "No" to question A.8.a, go to Part B, "Additional Application Information for Applicants with a Design Flow Greater than or Equal to 0.1 mgd."

A.9. Description of Outfall.

a. Outfall number 001

b. Location Bracey 23919
(City or town, if applicable) (Zip Code)

Mecklenburg VA
(County) (State)

N36°-34'-53" W78°-08'-44"
(Latitude) (Longitude)

c. Distance from shore (if applicable) NA ft.

d. Depth below surface (if applicable) NA ft.

e. Average daily flow rate 0.0706 mgd

f. Does this outfall have either an intermittent or a periodic discharge? ☐ Yes ☐ No (go to A.9.g.)

If yes, provide the following information:

No discharge in past 2 years

Number of times per year discharge occurs: No discharge for several years

Average duration of each discharge: _____

Average flow per discharge: _____ mgd

Months in which discharge occurs: _____

g. Is outfall equipped with a diffuser? ☐ Yes ☒ No

Cascade aeration

A.10. Description of Receiving Waters.

a. Name of receiving water a tributary of Lake Gaston

b. Name of watershed (if known) Roanoke River

United States Soil Conservation Service 14-digit watershed code (if known): _____

c. Name of State Management/River Basin (if known): Roanoke River

United States Geological Survey 8-digit hydrologic cataloging unit code (if known): _____

d. Critical low flow of receiving stream (if applicable)

acute _____ cfs chronic _____ cfs

e. Total hardness of receiving stream at critical low flow (if applicable): _____ mg/l of CaCO₃

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A.11. Description of Treatment

a. What level of treatment are provided? Check all that apply.

☐ Primary ☒ Secondary
☐ Advanced ☐ Other. Describe: _____

b. Indicate the following removal rates (as applicable):

Design BOD5 removal <u>or</u> Design CBOD5 removal	88	%
Design SS removal	88	%
Design P removal	NA	%
Design N removal	NA	%
Other _____		%

c. What type of disinfection is used for the effluent from this outfall? If disinfection varies by season, please describe:

Chlorination

If disinfection is by chlorination is dechlorination used for this outfall? Only by a basket of dechlorination tablets ☐ Yes ☒ No

Does the treatment plant have post aeration? ☒ Yes ☐ No

A.12. Effluent Testing Information. All Applicants that discharge to waters of the US must provide effluent testing data for the following parameters. Provide the indicated effluent testing required by the permitting authority for each outfall through which effluent is discharged. Do not include information on combined sewer overflows in this section. All information reported must be based on data collected through analysis conducted using 40 CFR Part 136 methods. In addition, this data must comply with QA/QC requirements of 40 CFR Part 136 and other appropriate QA/QC requirements for standard methods for analytes not addressed by 40 CFR Part 136. At a minimum, effluent testing data must be based on at least three samples and must be no more than four and one-half years apart.

Outfall number: 001

PARAMETER	MAXIMUM DAILY VALUE		AVERAGE DAILY VALUE		
	Value	Units	Value	Units	Number of Samples
pH (Minimum)	6.1	s.u.			
pH (Maximum)	8.5	s.u.			
Flow Rate	No Discharge	MD		MGD	
Temperature (Winter)	No Discharge	°F		°F	
Temperature (Summer)	No Discharge	°F		°F	

* For pH please report a minimum and a maximum daily value

POLLUTANT	MAXIMUM DAILY DISCHARGE		AVERAGE DAILY DISCHARGE			ANALYTICAL METHOD	ML/MDL
	Conc.	Units	Conc.	Units	Number of Samples		

CONVENTIONAL AND NON CONVENTIONAL COMPOUNDS

BIOCHEMICAL OXYGEN DEMAND (Report one)	BOD5	No Discharge	Mg/l		Mg/l		SM	NA
	CBOD5	NA	Mg/l	NA	Mg/l	NA	SM 5210	NA
FECAL COLIFORM	No Discharge	Col/100m			Col/100m		SM9222D	NA
TOTAL SUSPENDED SOLIDS (TSS)	No Discharge	mg/l			mg/l		EPA 160.2	NA

END OF PART A.

REFER TO THE APPLICATION OVERVIEW (PAGE 1) TO DETERMINE WHICH OTHER PARTS OF FORM 2A YOU MUST COMPLETE

FACILITY NAME AND PERMIT NUMBER: River Ridge Association Inc. VA0028029	PERMIT ACTION REQUESTED:	RIVER BASIN: Roanoke River
BASIC APPLICATION INFORMATION		
PART B. ADDITIONAL APPLICATION INFORMATION FOR APPLICANTS WITH A DESIGN FLOW GREATER THAN OR EQUAL TO 0.1 MGD (100,000 gallons per day).		
All applicants with a design flow rate ≥ 0.1 mgd must answer questions B.1 through B.6. All others go to Part C (Certification).		
B.1. Inflow and Infiltration. Estimate the average number of gallons per day that flow into the treatment works from inflow and/or infiltration. 20,000 – 25,000 _____ gpd Briefly explain any steps underway or planned to minimize inflow and infiltration. <u>Continuing to make minor repairs during maintenance repairs</u>		
B.2. Topographic Map. Attach to this application a topographic map of the area extending at least one mile beyond facility property boundaries. This map must show the outline of the facility and the following information. (You may submit more than one map if one map does not show the entire area.) See Attached Map a. The area surrounding the treatment plant, including all unit processes. b. The major pipes or other structures through which wastewater enters the treatment works and the pipes or other structures through which treated wastewater is discharged from the treatment plant. Include outfalls from bypass piping, if applicable. c. Each well where wastewater from the treatment plant is injected underground. d. Wells, springs, other surface water bodies, and drinking water wells that are: 1) within $\frac{1}{4}$ mile of the property boundaries of the treatment works, and 2) listed in public record or otherwise known to the applicant. e. Any areas where the sewage sludge produced by the treatment works is stored, treated, or disposed. f. If the treatment works receives waste that is classified as hazardous under the Resource Conservation and Recovery Act (RCRA) by truck, rail, or special pipe, show on the map where the hazardous waste enters the treatment works and where it is treated, stored, and/or disposed.		
B.3. Process Flow Diagram or Schematic. Provide a diagram showing the processes of the treatment plant, including all bypass piping and all backup power sources or redundancy in the system. Also provide a water balance showing all treatment units, including disinfection (e.g., chlorination and dechlorination). The water balance must show daily average flow rates at influent and discharge points and approximate daily flow rates between treatment units. Include a brief narrative description of the diagram. See attached schematic		
B.4. Operation/Maintenance Performed by Contractor(s). Are any operational or maintenance aspects (related to wastewater treatment and effluent quality) of the treatment works the responsibility of a contractor? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If yes, list the name, address, telephone number, and status of each contractor and describe the contractor's responsibilities (attach additional pages if necessary). Name: <u>B & B Consultants, Inc.</u> Mailing Address: <u>PO Box 429</u> <u>South Hill, VA 23970</u> Telephone Number: <u>434-447-7621</u> Responsibilities of Contractor: <u>assist owner with operation of treatment works, groundwater sampling, perform testing required by permit for BOD and TSS analysis when discharge occurs</u>		
B.5. Scheduled improvements and Schedules of Implementation. Provide information on any uncompleted implementation schedule or uncompleted plans for improvements that will affect the wastewater treatment, effluent quality, or design capacity of the treatment works. If the treatment works has several different implementation schedules or is planning several improvements, submit separate responses to question B.5 for each. (If none, go to question B.6.) None a. List the outfall number (assigned in question A.9) for each outfall that is covered by this implementation schedule. _____ b. Indicate whether the planned improvements or implementation schedule are required by local, State, or Federal agencies. <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		

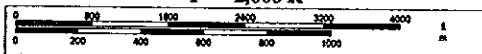
RIVER RIDGE - BRACEY



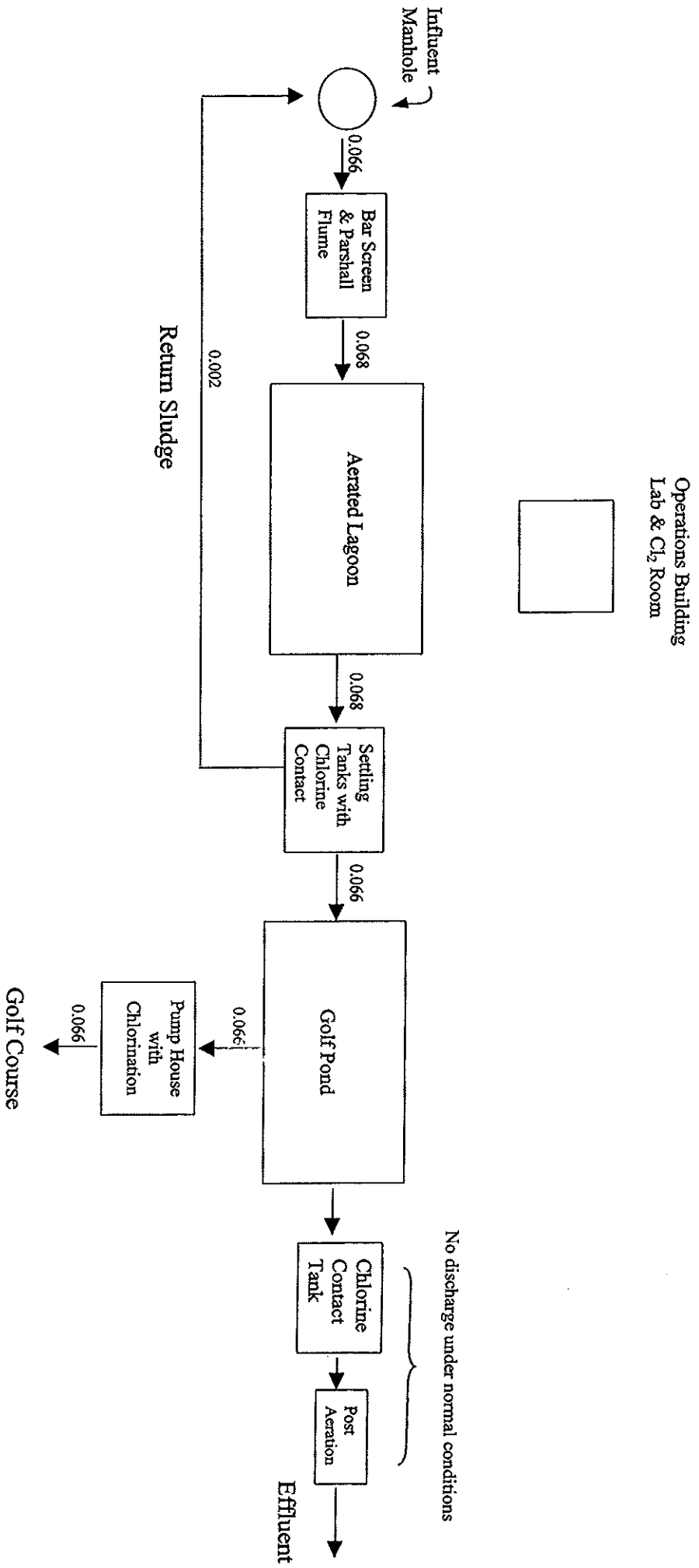
DELOORME

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Zoom Level: 13-0 Datum: NAD27

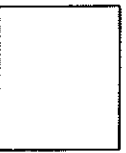
Scale 1 : 24,000
1" = 2,000 ft



Process Flow Diagram
River Ridge Association, Inc.
VPDES Permit # VA 0028029



Operations Building
 Lab & Cl₂ Room



RIVER RIDGE ASSOCIATION, INC.
 BRACEY, VIRGINIA
 VPDES PERMIT APPLICATION
 VA 0028029

B & B CONSULTANTS, INC
 P. O. BOX 429
 212 E. FERRELL STREET
 SOUTH HILL, VIRGINIA 23970
 (434)447-7621 · FAX (434)447-4257
 bandb@bandbcons.com

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c. If the answer to B.5.b is "Yes," briefly describe, including new maximum daily inflow rate (if applicable).

d. Provide dates imposed by any compliance schedule or any actual dates of completion for the implementation steps listed below, as applicable. For improvements planned independently of local, State, or Federal agencies, indicate planned or actual completion dates, as applicable. Indicate dates as accurately as possible.

Implementation Stage	Schedule MM/DD/YYYY	Actual Completion MM/DD/YYYY
- Begin Construction	/ /	/ /
- End Construction	/ /	/ /
- Begin Discharge	/ /	/ /
- Attain Operational Level	/ /	/ /

e. Have appropriate permits/clearances concerning other Federal/State requirements been obtained? NA ☐ Yes ☐ No

Describe briefly: _____

B.6. EFFLUENT TESTING DATA (GREATER THAN 0.1 MGD ONLY). This is a .1 mgd treatment plant.

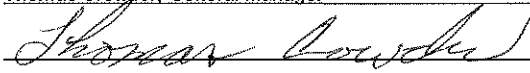
Applicants that discharge to waters of the US must provide effluent testing data for the following parameters. Provide the indicated effluent testing required by the permitting authority for each outfall through which effluent is discharged. Do not include information on combine sewer overflows in this section. All information reported must be based on data collected through analysis conducted using 40 CFR Part 136 methods. In addition, this data must comply with QA/QC requirements of 40 CFR Part 136 and other appropriate QA/QC requirements for standard methods for analytes not addressed by 40 CFR Part 136. At a minimum effluent testing data must be based on at least three pollutant scans and must be no more than four and on-half years old.

Outfall Number: 001 No Discharge/No DATA

POLLUTANT	MAXIMUM DAILY DISCHARGE		AVERAGE DAILY DISCHARGE			ANALYTICAL METHOD	ML/MDL
	Conc.	Units	Conc.	Units	Number of Samples		
CONVENTIONAL AND NON CONVENTIONAL COMPOUNDS							
AMMONIA (as N)							
CHLORINE (TOTAL RESIDUAL, TRC)							
DISSOLVED OXYGEN							
TOTAL KJELDAHL NITROGEN (TKN)							
NITRATE PLUS NITRITE NITROGEN							
OIL and GREASE							
PHOSPHORUS (Total)							
TOTAL DISSOLVED SOLIDS (TDS)							
OTHER							

END OF PART B.

REFER TO THE APPLICATION OVERVIEW (PAGE 1) TO DETERMINE WHICH OTHER PARTS OF FORM 2A YOU MUST COMPLETE

FACILITY NAME AND PERMIT NUMBER: River Ridge Association, Inc. VA0028029	PERMIT ACTION REQUESTED:	RIVER BASIN: Roanoke River
BASIC APPLICATION INFORMATION		
PART C. CERTIFICATION		
<p>All applicants must complete the Certification Section. Refer to Instructions to determine who is an officer for the purposes of this certification. All applicants must complete all applicable sections of Form 2A, as explained in the Application Overview. Indicate below which parts of Form 2A you have completed and are submitting. By signing this certification statement, applicants confirm that they have reviewed Form 2A and have completed all sections that apply to the facility for which this application is submitted.</p>		
<p>Indicate which parts of Form 2A you have completed and are submitting:</p> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <p><input checked="" type="checkbox"/> Basic Application Information packet</p> </div> <div style="width: 50%;"> <p>Supplemental Application Information packet:</p> <p><input type="checkbox"/> Part D (Expanded Effluent Testing Data)</p> <p><input type="checkbox"/> Part E (Toxicity Testing: Biomonitoring Data)</p> <p><input type="checkbox"/> Part F (Industrial User Discharges and RCRA/CERCLA Wastes)</p> <p><input type="checkbox"/> Part G (Combined Sewer Systems)</p> </div> </div>		
ALL APPLICANTS MUST COMPLETE THE FOLLOWING CERTIFICATION.		
<p>I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.</p>		
Name and official title	<u>Thomas Crowder, General Manager</u>	
Signature	<u></u>	
Telephone number	<u>(434)636-5492</u>	
Date signed	<u>11-19-08</u>	
<p>Upon request of the permitting authority, you must submit any other information necessary to assure wastewater treatment practices at the treatment works or identify appropriate permitting requirements.</p>		

SEND COMPLETED FORMS TO:

Commonwealth of Virginia
 Department of Environmental Quality
 Piedmont Regional Office
 4949-A Cox Road
 Glen Allen, Virginia 23060